

What is claimed is:

1. A non-volatile semiconductor memory device,  
comprising:

5 a memory cell array having electrically erasable and programmable non-volatile memory cells, a part of said memory cell array being defined as a initial set-up data region for storing a plurality of initial set-up data that define memory operation conditions;

10 a plurality of data latch circuits for holding the respective initial set-up data read out from said initial set-up data region;

a controller for controlling data program and erase operations for said memory cell array; and

15 a clock generator for generating a clock signal that is used to define an operation timing of said controller, wherein

said controller is configured to perform such an initial set-up operation that sequentially reads out said plurality of initial set-up data stored in said initial  
20 set-up data region and transfers them to the respective data latch circuits on receipt of power-on or a command input, said initial set-up operation being so performed as to read out a clock cycle adjustment data within said plurality of initial set-up data stored in said initial  
25 set-up data region in the beginning, thereby adjusting a clock cycle of said clock signal output from said clock generator by use of said clock cycle adjustment data, and

then reads out the remaining initial set-up data by use of the adjusted clock signal.

2. The memory device according to claim 1, further comprising:

5       a power-on detecting circuit for detecting power-on to activate said controller to perform said initial set-up operation.

3. The memory device according to claim 1, wherein said clock generator comprises:

10       a ring oscillator; and

      a delay circuit disposed in said ring oscillator, a delay time of which being defined by said clock cycle adjustment data.

4. The memory device according to claim 3, wherein

15       said delay circuit comprises a CR time constant circuit having a resistor and a capacitor, at least one of said resistor and capacitor being variably controlled in response to said clock cycle adjustment data.

5. The memory device according to claim 1, further

20       comprising:

      a boost circuit for boosting a power supply voltage in response to power-on to supply a boosted voltage to a power supply node of said clock generator.

6. The memory device according to claim 1, wherein

25       said controller has a test mode so programmed as to check said initial set-up data stored in said initial set-up data region of said memory cell array on receipt of a

command input from an external terminal.

7. The memory device according to claim 1, wherein  
said controller has a test mode so programmed as to  
rewrite said initial set-up data stored in said initial  
5 set-up data region of said memory cell array on receipt of  
a command input from an external terminal.

8. The memory device according to claim 1, wherein  
said controller has a test mode so programmed as to  
check said initial set-up data stored in said data latch  
10 circuits on receipt of a command input from an external  
terminal.

9. The memory device according to claim 1, wherein  
said controller has a test mode so programmed as to  
rewrite said initial set-up data stored in said data latch  
15 circuits on receipt of a command input from an external  
terminal.

10. The memory device according to claim 1, wherein  
said memory cell array has a plurality of NAND cell  
units each of which has a plurality of serially connected  
20 memory cells and a select transistor through which said  
serially connected memory cells are connected to a bit line,  
said serially connected memory cells being driven by  
different word lines from each other.

11. A non-volatile semiconductor memory device,  
25 comprising:

a memory cell array having electrically erasable and  
programmable non-volatile memory cells, a part of said

memory cell array being defined as a initial set-up data region for storing a plurality of initial set-up data that define memory operation conditions;

data latch circuits for holding said initial set-up  
5 data read out from said initial set-up data region;

a controller for controlling data program and erase operations for said memory cell array;

a clock generator for generating a clock signal that is used to define an operation timing of said controller;

10 a first boost circuit for outputting a boosted voltage necessary for data read, program and erase of said memory cell array; and

a second boost circuit for boosting a power supply voltage in response to power-on to supply a boosted voltage  
15 to a power supply node of said clock generator.

12. The memory device according to claim 11, wherein said controller is configured to perform such an initial set-up operation that sequentially reads out said plurality of initial set-up data stored in said initial  
20 set-up data region and transfers them to the respective data latch circuits on receipt of power-on or a command input, said initial set-up operation being so performed as to read out a clock cycle adjustment data within said plurality of initial set-up data stored in said initial  
25 set-up data region in the beginning, thereby adjusting a clock cycle of said clock signal output from said clock generator by use of said clock cycle adjustment data, and

then reads out the remaining initial set-up data by use of the adjusted clock signal.

13. The memory device according to claim 11, further comprising:

5 a power-on detecting circuit for detecting power-on to activate said controller to perform said initial set-up operation.

14. The memory device according to claim 11, wherein said clock generator comprises:

10 a ring oscillator; and

a delay circuit disposed in said ring oscillator, a delay time of which being defined by said clock cycle adjustment data.

15. The memory device according to claim 14, wherein

15 said delay circuit comprises a CR time constant circuit having a resistor and a capacitor, at least one of said resistor and capacitor being variably controlled in response to said clock cycle adjustment data.

16. The memory device according to claim 11, wherein

20 said controller has a test mode so programmed as to check said initial set-up data stored in said initial set-up data region of said memory cell array on receipt of a command input from an external terminal.

17. The memory device according to claim 11, wherein

25 said controller has a test mode so programmed as to rewrite said initial set-up data stored in said initial set-up data region of said memory cell array on receipt of

a command input from an external terminal.

18. The memory device according to claim 11, wherein  
said controller has a test mode so programmed as to  
check said initial set-up data stored in said data latch  
5 circuits on receipt of a command input from an external  
terminal.

19. The memory device according to claim 11, wherein  
said controller has a test mode so programmed as to  
rewrite said initial set-up data stored in said data latch  
10 circuits on receipt of a command input from an external  
terminal.

20. The memory device according to claim 11, wherein  
said memory cell array has a plurality of NAND cell  
units each of which has a plurality of serially connected  
15 memory cells and a select transistor through which said  
serially connected memory cells are connected to a bit line,  
said serially connected memory cells being driven by  
different word lines from each other.